

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

BHANU RAM and MAHESH THAKUR

Plaintiffs,

vs.

No. CIV 05-1083
JB/WPL

NEW MEXICO DEPARTMENT
OF ENVIRONMENT, NED JERABEK,
Individually and as a Supervisor of NMDOE
and RICHARD GOODYEAR, Individually
and as a Supervisor of NMDOE,

Defendants.

MEMORANDUM OPINION AND ORDER

THIS MATTER comes before the Court on: (i) the Defendants' Motion in Limine to Exclude Testimony, Opinions or Reports by Candace Schau, Ph.D. Regarding Salary Analysis, filed October 31, 2006 (Doc. 62); and (ii) the Defendants' Motion in Limine to Exclude Testimony, Opinions or Reports by Candace Schau, Ph.D. Regarding EAFA Review, filed October 31, 2006 (Doc. 64). The Court held an evidentiary Daubert hearing on these two motions on December 7, 2006. The primary issues are: (i) whether, assuming that Dr. Schau is offering expert testimony involving descriptive statistical analysis, that testimony is reliable under Daubert; and (ii) whether, assuming that she is not offering expert testimony, the Court should allow her to testify about her description of the numbers in documents given to her. Because the Court concludes that Dr. Schau's testimony, to the extent that it represents expert testimony, does not satisfy the Supreme Court of the United States and the United States Court of Appeals for the Tenth Circuit's reliability requirements, and because the Court concludes that, to the extent that the evidence is reliable, it does not assist the

trier of fact in this case, the Court will exclude Dr. Schau's testimony, opinion, and/or reports and will grant the Defendants' motions.

FACTUAL BACKGROUND

This case arises from the Plaintiffs' allegations that, incident to their employment at the New Mexico Department of Environment ("NMED"), they were discriminated against because of their Indian national origin. See Plaintiffs Ram and Thakur's Third Amended Complaint for Damages Related to Employment and Civil Rights Claims, filed December 11, 2006 (Doc. 84)("Complaint").

Both Plaintiffs are Environmental Scientists who worked as Title V permit engineers in the Air Quality Bureau ("AQB") of the NMED. See Complaint ¶ 6, at 2; Memorandum of Law in Support of Defendants' Motion in Limine to Exclude Testimony Opinions or Reports by Candace Schau, Ph.D. Regarding Salary Analysis, filed October 31, 2006 (Doc. 63)("Defendants' Salary Analysis Memorandum"). The Plaintiffs premise their action on theories of disparate impact and treatment discrimination, unlawful retaliation, and subjection to a hostile work environment. See Complaint ¶ 9, at 3.

1. Title V Permitting Group.

The NMED is a state agency charged with the administration of environmental laws and the performance of governmental and regulatory functions associated with the environment. See N.M. Stat. Ann. § 9-7A-3. The NMED's mission "is to provide the highest quality of life throughout the state by promoting a safe, clean, and productive environment." New Mexico Department of Environment Mission Statement, available at <http://www.nmenv.state.nm.us/Common/mission.htm>.

The AQB is the entity within the NMED charged with protecting "the inhabitants and natural beauty of New Mexico by preventing the deterioration of the air quality." Air Quality Bureau

website, available at <http://www.nmenv.state.nm.us/aqb/>. The AQB consists of four program groups: (i) Enforcement; (ii) Planning and Policy; (iii) Operations; and (iv) Permit Programs. See Defendants' Salary Analysis Memorandum at 2. Defendant Richard Goodyear is the Permit Programs Manager, and at all times relevant to this lawsuit, was in the Plaintiffs' chain of command. See id.; Complaint ¶ 7, at 2.

Title V Permitting¹ is one of three sections within the Permit Programs group. See Defendants' Salary Analysis Memorandum at 2. There are five permit engineer positions in the Title V Permitting section. See id. Plaintiff Bhanu Ram held a Title V permit engineer position from 1996 until he was terminated in August 2005. See id. Plaintiff Manesh Thakur joined the Title V group in 1997, and he remains in his position. See id. Defendant Ned Jerabek has been the Title V supervisor since October 1997, and at all times relevant to this lawsuit, was in the Plaintiffs' chain of command. See id.; Complaint ¶ 7, at 2.

2. EAFAs.

To assist it in evaluating the performance of permit engineers, the Permit Programs group developed a metric called Equivalent Application Final Actions ("EAFA"). See Memorandum of Law in Support of Defendants' Motion in Limine to Exclude Testimony, Opinions or Reports by Candace Schau, Ph.D. Regarding EAFA Review at 7, filed October 31, 2006 (Doc. 65) ("Defendants EAFA Memorandum"). An EAFA score is automatically assigned to each permit processed, taking into account the applicant's characteristics and the difficulty of the work done on the permit. See id.

¹The Clean Air Act and the New Mexico regulations that implement the Act require entities with a potential to emit more than prescribed amounts of pollutants to apply for Title V permits. See Defendants' Salary Analysis Memorandum at 2. Title V permits set forth standards and enforceable limitations on an entity's emissions, and include periodic reporting, monitoring, and record-keeping obligations. See id.

For the purposes of the permit engineers' evaluations, an engineer's EAFA score is the total of EAFA points that an engineer has accumulated for all the permits processed and issued during the review period. See id. An engineer's EAFA score constitutes twenty percent of the engineer's performance evaluation. See id. at 8; Defendants EAFA Memorandum, Exhibit B, Standards for Evaluating Performance of Employees (Environmental Scientist and Specialist) Who Process Title V and NSR Permit Applications, at 2.

3. Dr. Schau.

Dr. Schau has not been qualified or testified as an expert witness in any court in any case. See Defendants' Salary Analysis Memorandum at 9 n.1; See Transcript of Hearing at 96:4-7 (Schau)(taken December 7, 2006)("Transcript").² The Plaintiffs acknowledge that Dr. Schau has not heretofore been certified as an expert witness, but contend that her curriculum vitae, her list of publications, and her expert report all establish her expertise. See Plaintiffs Ram and Thakur's Response to Motion in Limine to Exclude Salary Analysis by Dr. Schau ¶ 1, at 1, filed November 21, 2006 (Doc. 68)("Plaintiffs Salary Analysis Response").

Dr. Schau is a statistician who operates a consulting enterprise specializing in "designing evaluations and research, developing instruments, collecting and analyzing data, interpreting results, giving presentations, and writing reports and articles." Plaintiffs Ram and Thakur's Exhibit Addendum to Response to Motion in Limine To Exclude Salary Analysis by Dr. Schau, filed November 21, 2006 (Doc. 71)("Plaintiffs' Salary Analysis Exhibit Addendum"), Exhibit 1, Curriculum Vitae of Candace Garrett Schau, at P-3100 ("Schau Resume"). She has operated her

²The Court's citations to the transcript of the hearing refer to the Court Reporter's original, unedited version. Any final transcript may contain slightly different page and/or line numbers.

own consulting firm since 1984. See id. Dr. Schau holds a bachelor's degree in physics with minors in mathematics and education, and a doctorate in psychology with a graduate minor in applied statistics. See id.

Dr. Schau has taught graduate-level courses in introductory statistics, multiple regression, multiple-dependent measures, structural-equation modeling, meta-analysis techniques, and research and evaluation methods. See id. at P-3104; Transcript at 16:21-17:5 (Schau). She has served as director of the University of New Mexico's ("UNM") Education Statistics Laboratory and as Assistant Dean for Research at the UNM College of Education. See Schau Resume at P-3105; Transcript at 17:12-14 (Schau). Dr. Schau has published extensively in the field of statistics, and has lectured and presented at national and international conferences on statistics. See Schau Resume at P-3110-3113. Finally, Dr. Schau is currently an Associate Editor of the Journal of Statistics Education and has served on the editorial board of various publications related to statistics and research. See Schau Resume at P-3114; Transcript at 17:25-18:12 (Schau).

PROCEDURAL BACKGROUND

1. The Plaintiffs' Claims.

The Plaintiffs allege that the Defendants intentionally discriminated against them based on their Indian national origin, and, among other things, used and manipulated the employee performance review system to rate the Plaintiffs at a less than successful level to prohibit promotions and to prevent the Plaintiffs from receiving pay raises. See Complaint ¶ 11, at 5. Further, the Plaintiffs allege that, when they complained that the performance review standards were discriminating, the Defendants retaliated against them. See id. ¶¶ 14-15, at 6.

The Plaintiffs' Complaint raises four claims against the various Defendants. The first claim

is against all the Defendants and alleges violations of the New Mexico Human Rights Act, N.M. Stat. Ann. §§ 28-1-1 to -15, disparate treatment and impact discrimination, unlawful retaliation, and subjection to a hostile work environment. See Complaint ¶¶ 10-17, at 5-6. The Plaintiffs' second claim is against NMED and alleges violations of Title VII of the Civil Rights Act of 1964, 42 U.S.C. §§ 2000e-2000e-17, disparate treatment and impact discrimination, unlawful retaliation, and subjection to a hostile work environment. See Complaint ¶¶ 18-25, at 7-8. The Plaintiffs' bring their third claim under 42 U.S.C. § 1983 against Goodyear and Jerabek, in their individual capacities, and assert that the Defendants' actions constituted discrimination based on national origin in violation of the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution and retaliation against free speech in violation of the First Amendment to the United States Constitution. See Complaint ¶¶ 26-30, at 8-9. Finally, the Plaintiffs' fourth claim alleges that all Defendants engaged in a conspiracy to violate the Plaintiffs' constitutional rights in violation of 42 U.S.C. § 1985(3). See Complaint ¶¶ 31-35, at 10-11.

2. Dr. Schau's Work on the Salary Analysis.

Dr. Schau performed a salary analysis of fifty-two NMED employees who worked as "permitters" for at least six months from 1997 through 2005. Transcript at 25:3-5 (Schau). See Defendants' Salary Analysis Memorandum at 4 ; Plaintiffs' Salary Analysis Response at 6. Dr. Schau identified this group of employees by beginning with the universe of employees who could produce permits, a total of sixty-five individuals, and then excluding all individuals who were not Indian or "Anglo" -- a term she defined as including white, non-Hispanic individuals from the United States. Transcript at 25:8-11; 76:20 (Schau). See Defendants' Salary Analysis Memorandum at 4; Plaintiffs' Salary Analysis Response at 7. In performing her analysis, Dr. Schau testified that she was able to

compile data on national origin for each individual in her sample, and considered, in most but not all cases, whether each had an undergraduate degree or a graduate degree, although she was unable to determine the subject matter of each employee's degrees. See Transcript at 27:1-19; 84:22-25 (Schau). Dr. Schau did not consider how many years experience each individual employee had or whether they had any previous professional or personal experience which might be relevant. See id. at 84:4-9 (Schau). Finally, Dr. Schau assigned each permitter a salary by selecting the highest salary listed for that individual employee during the last six months of each year. See id. at 25:20-26:1 (Schau).

Dr. Schau's analysis did not make any distinctions between normal permit engineers and supervisory employees with some permitting responsibility whose performance standards may have been different. See Defendants' Salary Analysis Memorandum at 11; Transcript at 67:8-11; 83:22-24 (Schau). Schau testified that she was not aware that at least two Indian employees included in her analysis had supervisory roles for at least certain periods of time included in her analysis. See Transcript at 72:11-73:6; 76:10-12 (Schau).

Dr. Schau testified that she performed a descriptive statistical analysis of all the salary information related to the permitters group. See Transcript at 40:15-18 (Schau). Dr. Schau characterizes salary as "the highest variable in the hierarchy in terms of evaluating the value that [an] organization places on the employee." See id. at 31:18-20 (Schau). Dr. Schau's analysis of permitters' median salaries indicates that, from 1997 until 2000, the Indian permitters were paid more than the Anglo permitters. See id. at 32:1-3 (Schau); Plaintiffs' Salary Analysis Exhibit Addendum, Appendix A, Graph 1 ("Graph 1"). Dr. Schau testified that this result is not surprising, because, during this period, the Indian permitters tended to have master's degrees, while only a minority of

Anglo permittees had master's degrees. See Transcript at 32:3-7 (Schau). Dr. Schau acknowledged that the graph which she prepared to demonstrate this data, Graph 1, is only a graph of salaries and does not take into account education levels. See id. at 77:25-78:1 (Schau).

Dr. Schau represents that, even though the permittees' education levels did not change, beginning in 2000, the Anglo permittees had higher median salaries than the Indian permittees. See id. at 32:8-16 (Schau); Graph 1. In addition, Dr. Schau states that her findings indicate that this general trend was also reflected in the Plaintiffs' individual salaries when compared to Anglo permittees' salaries. See Transcript at 33:2-9 (Schau); Plaintiffs' Salary Analysis Exhibit Addendum, Appendix A, Graph 2 ("Graph 2").

Dr. Schau testified that it was her understanding that the Plaintiffs had applied to be promoted and were turned down, and that Jerabek had been promoted. See Transcript at 81:24-82:1 (Schau). In reaching her conclusion that the salary analysis she performed reflected discriminatory treatment against the Plaintiffs, Dr. Schau did not review any information regarding qualifications necessary for promotion or information related to the jobs for which the Plaintiffs had applied. See id. at 82:2-6 (Schau). She acknowledged that she does not know whether the Plaintiffs were qualified for the positions for which they applied. See id. at 82:10-12 (Schau). She also did not consider any employee performance reviews. See id. 85:25-86:2 (Schau).

3. Dr. Schau's Work on the EAFA Scores.

Dr. Schau stated that she analyzed EAFA scores in an attempt to discover differences in performance between Indian and Anglo permittees. See Transcript at 34:4-7 (Schau). Dr. Schau represents that she reviewed three summary reports of EAFA scores in terms of Title V permits, and performed a descriptive statistical analysis on two of those reports, from 2003 and 2005 respectively,

in preparing her findings. See id. at 33:14-16; 38:7-9 (Schau). She stated that, with these two reports, she was able to review EAFA scores for the years 1995 through 2002. See id. at 33:18-20 (Schau). Dr. Schau admits that her conclusions are based on her review of summary reports that the Plaintiffs provided her, and that she did not verify the accuracy of the summary reports against the original EAFA internal data sheets which constitute the data upon which the summaries are based. See id. at 37:12-14; 45:25 - 46:1 (Schau). Dr. Schau also admitted that she was unaware that the AQB did not use EAFA scores as a evaluative measurement until 2000, see id. at 60:17-20 (Schau), and that she did not review any deposition testimony regarding the AQB's implementation of new personnel management software in 2002, see id. at 61:16-24 (Schau). In conducting her anlysis of the EAFA scores, Dr. Schau did not read any performance reviews of any of the permitters. See id. at 65:5-7 (Schau).

Based on her review of the EAFA score reports, Dr. Schau concluded that, from one report to another, points were reassigned from Indian permitters to Anglo permitters. See Plaintiffs Ram and Thakur's Exhibit Addendum to Response to Motion in Limine to Exlude EAFA Analysis by Dr. Schau, filed November 21, 2006 (Doc. 72)(“Plaintiffs EAFA Exhibit Addendum”), Exhibit 2, Summary of Findings ¶ 7, at 2 (“Summary of Findings”); Transcript at 37:5-8 (Schau). Dr. Schau points out, as an example, that Jerabek was not included in the 2003 report and thus, according to the 2003 report, was not awarded any EAFA points for the years 1995 through 2002. See Transcript at 35:9-12 (Schau). Nevertheless, Dr. Schau notes that Jerabek is included in the 2005 report and is credited with EAFA points for years in which he is not credited for points in the 2003 report. See id. at 35:13-15 (Schau). Dr. Schau acknowledged that she has no way of ascertaining the cause of the discrepancies between the reports, or to which permits any particular points were attached. See

id. at 52:2-4; 69:7-10 (Schau). She also acknowledges that she did not analyze the employment consequences to permitters who may have lost points from the 2003 to the 2005 EAFA reports, but who did not fall within the group of permitters subject to her salary analysis. See id. at 67:1-7 (Schau). Finally, Dr. Schau did not chart out any differences that occurred in the third summary report that she did not use. See id. at 68:14-16 (Schau).

At the hearing on these motions, Dr. Schau explained that there were two aspects to her descriptive analysis of the EAFA scores. First, she created a table that reflects the differences in the 2003 and 2005 reports with respect to nine employees whose 1995 to 2002 EAFA scores vary between the reports. See id. at 41:5-9 (Schau); Plaintiffs EAFA Exhibit Addendum, Appendix B, Table 6. Second, Dr. Schau identified the five employees whose EAFA scores had changed most significantly between the reports -- Imam Imanuddin, Joe Kimbrell, Jerabek, Ram, and Thakur -- and represented those changes in a bar graph. See Transcript at 41:10-14 (Schau); Plaintiffs EAFA Exhibit Addendum, Appendix A, Graph 5.

4. Dr. Schau's Summary of Findings.

Dr. Schau prepared the following Summary of Finding in conjunction with the salary analysis she performed and her review of the EAFA scores:

1. There were no Indian administrators in the New Mexico Environment Department from 1997 through 2005, the time period studied for salaries.
2. A majority of Indians who produced permits (called permitters) possessed Graduate degrees while a majority of Anglo permitters possessed Bachelor's degrees.
3. Although the median hourly salaries of Indian permitters were higher than those of Anglo permitters from 1997 through 1999, their median salary increases were lower across most of the years studied.

4. Mr. Ram consistently was paid less than the median hourly salaries of the Anglo permitter group from 2000 through 2005. Although he too possessed a Bachelor's degree, he was paid less than the median hourly salaries of Anglo permitters with Bachelor's degrees from 2002 through 2005. Mr. Ram did not receive a raise from 2001 to 2005.
5. Mr. Thakur was paid less than the median hourly salaries of the Anglo permitter group from 2002 to 2005. Despite Mr. Thakur's possession of a Master's degree, he was paid less than the median salaries of Anglo permitters with Bachelor's degree during this same time period. From 2001 to 2005, Mr. Thakur received only one raise (in 2004), and it was small in comparison to the raises received by the Anglo permitters.
6. After leaving the department in 2003, Mr. Solomon was hired in 2005 back into the Department's Permitting Section of the Air Quality Bureau with a large salary increase. The other three Indian permitters received either no raises or much smaller ones across this time period.
7. Many Title V EAFA points were reassigned from Indian permitters to Anglo permitters from at least 1997 through 2002. Anglo permitters as a group recorded a net gain of 17 reassigned EAFA points from the 2003 to 2005 report. Indian permitters lost 18.75 EAFA points. Mr. Jerabek, an Anglo, was not included in the 2003. Yet he was attributed 16.5 EAFA points in the 2005 report for those same years. Mr. Kimbrell, also an Anglo, was attributed 6 additional EAFA points in the 2005 report, 5 of these in the years 1997, 1998, and 2000; according to Personnel Action Sheets, he was not even hired until 2002.

Summary of Findings ¶¶ 1-7, at 1-2.

5. Dr. Schau's Opinion Testimony.

At the hearing on this motion, Dr. Schau admitted that she was not an expert in ethnic discrimination. See Transcript at 102:16-17 (Schau). Nevertheless, at the hearing on this motion, and in her deposition testimony, Dr. Schau indicated that she believed the Plaintiffs, and other Indian national origin workers at the NMED, had suffered discriminatory treatment. Dr. Schau stated that her "opinion is that discrimination occurred," and that this conclusion was supported by patterns in the data she analyzed. Transcript at 99:23-25 (Schau). With respect to the EAFA scores,

specifically, Dr. Schau stated that, after looking at the numbers, “[i]t appears that national origin was at issue here.” Id. at 37:6-8 (Schau). Finally, Dr. Schau draws support for her conclusion by noting that the Plaintiffs stopped receiving salary increases in 2001 -- the time during which Dr. Schau understood the Plaintiffs to have begun filing internal complaints alleging discriminatory treatment. See id. at 87:9-23 (Schau); Plaintiffs’ Salary Analysis Exhibit Addendum, Exhibit 3, Deposition of Candace Schau, Ph.D. at 115:12-19 (“Schau Deposition”)(“I know of one thing that happened [in 2001], which is Mr. Ram and Mr. Thakur were getting serious about trying to do something about their wretched salaries, and so [retaliation] is certainly one possibility, and perhaps, I think, a real likely possibility.”).

6. The Motions.

The Defendants move the Court in limine for an order prohibiting the Plaintiffs’ introduction of testimony, opinions, or reports of Dr. Schau related to her salary analysis, discrimination and disparate treatment or impact. See Defendants’ Salary Analysis Memorandum at 13. The Defendants also move the Court in limine for an order prohibiting the Plaintiffs’ introduction of testimony, opinions, or reports regarding Dr. Schau’s review of EAFA score reports. See Defendants’ EAFA Memorandum at 18. The Defendants also assert that another of the Plaintiffs’ expert witnesses, Michael Stafford, Ph.D., incorporates at least some of Dr. Schau’s EAFA findings into his own analysis. See id. at 10; Defendants’ EAFA Memorandum, Exhibit D, Final Review of Work Performed by Bhanu Ram and Mahesh Thakur at 7-8 (dated October 9, 2006). The Defendants assert that, to the extent Dr. Stafford relies on “unreliable and irrelevant information from Dr. Schau and Plaintiffs, his testimony, opinions and report should also be excluded.” Defendants’ EAFA Memorandum at 10.

The Defendants requested that both of their motions be heard at a pre-trial evidentiary hearing. See Defendants' Salary Analysis Memorandum at 8; Defendants EAFA Memorandum at 7. The Court held an evidentiary hearing on these motions on December 7, 2006.

RULE 403

Rule 403 of the Federal Rules of Evidence authorizes a trial court to exclude relevant evidence "if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence." Fed. R. Evid. 403. In evaluating whether evidence should be excluded on grounds of unfair prejudice, courts should consider the probable effectiveness of a limiting instruction and the availability of less prejudicial, alternative means of proof. See Old Chief v. United States, 519 U.S. 172, 184-85 (1997)("[W]hen Rule 403 confers discretion by providing that evidence 'may' be excluded, the discretionary judgment may be informed not only by assessing an evidentiary item's twin tendencies, but by placing the result of that assessment alongside similar assessments of evidentiary alternatives."); Fed. R. Evid. 403 advisory committee's note. The Tenth Circuit has cautioned trial courts that "[e]xcluding otherwise admissible evidence under Rule 403 'is an extraordinary remedy that should be used sparingly.'" Mendelsohn v. Sprint/United Mgmt. Co., 466 F.3d 1223, 1231 (10th Cir. 2006)(quoting United States v. Roberts, 88 F.3d 872, 880 (10th Cir. 1996)).

USE OF STATISTICAL EVIDENCE IN DISPARATE IMPACT CASES

To succeed in a disparate impact claim, a plaintiff must prove the existence of employment practices "that are fair in form, but discriminatory in operation." Griggs v. Duke Power Co., 401 U.S. 424, 431 (1971). More specifically, disparate impact cases "involve employment practices that

are facially neutral in their treatment of different groups but that in fact fall more harshly on one group than another and cannot be justified by business necessity.” Int’l Bhd. of Teamsters v. United States, 431 U.S. 324, 335 n.15 (1977). See Carpenter v. Boeing Co., 456 F.3d 1183, 1187 (10th Cir. 2006)(“A plaintiff may establish a prima facie case of disparate impact discrimination by showing that a specific identifiable employment practice or policy caused a significant disparate impact on a protected group.”)(quoting Bullington v. United Air Lines, Inc., 186 F.3d 1301, 1312 (10th Cir. 1999)). Consequently, in disparate impact cases, unlike disparate treatment cases, proof of discriminatory motive is irrelevant. See Ortega v. Safeway Stores, Inc., 943 F.2d 1230, 1242 (10th Cir. 1991).

The Supreme Court has held that statistical evidence alone is sufficient to establish a prima facie case of disparate impact discrimination. See Hazelwood Sch. Dist. v. United States, 433 U.S. 299, 307-08 (1977)(“Where gross statistical disparities can be shown, they alone may in a proper case constitute prima facie proof of a pattern or practice of discrimination.”). Statistics are not irrefutable, however, and any proffered statistical analysis “must involve the appropriate comparables, and must ‘cross a threshold of reliability before it can establish even a prima facie case of disparate impact.’” Ortega v. Safeway Stores, Inc., 943 F.2d at 1243 (internal citation omitted)(quoting Allen v. Seidman, 881 F.2d 375, 378 (7th Cir. 1989)). See Int’l Bhd. of Teamsters v. United States, 431 U.S. at 340 (noting statistics “come in infinite variety and, like any other kind of evidence, they may be rebutted”).

Although statistical evidence may be an important indirect indicator of racial discrimination, its value may be diluted by factors such as an inadequate sample size and failure to consider similarly situated individuals. See Mayor of Philadelphia v. Educ. Equal. League, 415 U.S. 605, 621 (1974);

Martinez v. Wyoming, 218 F.3d 1133, 1138-39 (10th Cir. 2000). Moreover, the Tenth Circuit has repeatedly held that, “in order for statistical evidence to create an inference of discrimination, the statistics must . . . eliminate nondiscriminatory explanations for the disparity.” Rea v. Martin Marietta Corp., 29 F.3d 1450, 1456 (10th Cir. 1994)(quoting Fallis v. Kerr-McGee Corp., 944 F.2d 743, 746 (10th Cir. 1991)). See Martinez v. Wyoming, 218 F.3d at 1139; Doan v. Seagate Tech., Inc., 82 F.3d 974, 979 (10th Cir. 1996). Finally, because statistical evidence is only helpful when it demonstrates disparate impact among comparable individuals, statistics that do not “adjust ‘for the various performance evaluations and departmental rankings of the employees included in the statistical pool’ do[] not compare ‘similarly situated’ employees and therefore ‘fail[] to eliminate nondiscriminatory explanations for disparate treatment.’” Pippin v. Burlington Res. Oil & Gas Co., 440 F.3d 1186, 1198 (10th Cir. 2006).

RULE 702 AND THE DAUBERT FACTORS

1. Rule 702.

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert testimony:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. Thus, rule 702 requires the trial court “determine whether the expert is proposing to testify to (1) scientific, technical, or other specialized knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.” United States v. Muldrow, 19 F.3d 1332, 1337 (10th Cir. 1994). The proponent of expert testimony has the burden of establishing that the pertinent

admissibility requirements are met by a preponderance of the evidence. See Morales v. E.D. Etnyre & Co., 382 F. Supp. 2d 1252, 1266 (D.N.M. 2005)(Browning, J.)(citing Bourjaily v. United States, 483 U.S. 171, 175 (1987)). Once the trial court has determined that expert testimony would be helpful to the trier of fact, a witness “may qualify as an expert by ‘knowledge, skill, experience, training, or education’ and . . . the ‘expert’ . . . should not be required to satisfy an overly narrow test of his own qualifications.” Gardner v. Gen. Motors Corp., 507 F.2d 525, 528 (10th Cir. 1974). Expert testimony is liberally admissible under the Federal Rules of Evidence, see United States v. Gomez, 67 F.3d 1515, 1526 (10th Cir. 1995)(describing rule 702 as a “liberal standard”), and the trial court has broad discretion in deciding whether to admit or exclude expert testimony, see Werth v. Makita Elec. Works, Ltd., 950 F.2d 643, 647 (10th Cir. 1991)(noting the trial court’s decision will not be overturned “unless it is manifestly erroneous or an abuse of discretion”).

2. The Daubert Standard.

In 1993, the Supreme Court ruled that, in addition to a witness being qualified as an expert, the witness’ opinion testimony must be reliable from an evidentiary standpoint and fit the facts of the case. See Daubert, 509 U.S. at 590-91. Under the standard that the Supreme Court established in Daubert, “[p]roposed testimony must be supported by appropriate validation– i.e., ‘good grounds.’” Id. at 590. Accordingly, the requirements of Daubert assign trial judges a gatekeeper function that “entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue.” Id. at 592-93.

An expert must base his or her opinion on scientific knowledge, and must derive that knowledge by the scientific method; if an expert’s testimony does not pertain to scientific knowledge,

it lacks evidentiary reliability. See id. at 589-90. A showing that the knowledge offered is more than speculative belief or unsupported speculation demonstrates evidentiary reliability. See id. at 590. While certainty is not required, the expert must base the knowledge asserted on good scientific grounds. See id. (“[I]t would be unreasonable to conclude that the subject of scientific testimony must be ‘known’ to a certainty.”).

Scientific knowledge requires more than guesswork; it must be grounded in a body of known facts or a body of ideas inferred from such facts. See Norris v. Baxter Healthcare Corp., 397 F.3d 878, 886 (10th Cir. 2005)(noting that although “‘trained experts commonly extrapolate from existing data,’ neither Daubert nor the Federal Rules of Evidence ‘require[] a district court to admit opinion evidence which is connected to existing data only by the ipse dixit of the expert’”)(quoting Gen. Elec. Corp. v. Joiner, 522 U.S. 136, 146 (1997)). Generally, the focus is on the principles and methodologies, and not on the conclusions generated. See Daubert, 509 U.S. at 595. Despite this focus on methodology, “an expert’s conclusions are not immune from scrutiny . . . [and the] ‘court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.’” Dodge v. Cotter Corp., 328 F.3d 1212, 1222 (10th Cir. 2003)(quoting Gen. Elec. Corp. v. Joiner, 522 U.S. at 146).

The Supreme Court has provided district courts with guidance related to what factors they should consider when evaluating the reliability of expert testimony.

The Supreme Court in Daubert listed four nonexclusive factors that a trial court may consider in making its reliability assessment: (1) whether the theory at issue can be and has been tested; (2) whether the theory has been subjected to peer review and publication; (3) whether there is a known or potential rate of error and whether there are standards controlling the methodology’s operation; and (4) whether the theory has been accepted in the relevant scientific community.

United States v. Rodriguez-Felix, 450 F.3d 1117, 1123 (10th Cir. 2006). Once reliability is established, however, it is still within the district court's discretion to determine whether expert testimony will be helpful to the trier of fact. In making that determination, the court should consider, among other factors, the testimony's relevance, the jurors' common knowledge and experience, and whether the expert's testimony may usurp the jury's primary role as the evaluator of evidence. See id.

ANALYSIS

The Defendants allege that Dr. Schau's salary analysis is flawed because she failed to consider all the data, to compare similarly situated employees, and to rule out nondiscriminatory variables. See Defendants Salary Analysis Memorandum at 13. Because of these flaws, the Defendants argue that Dr. Schau is biased, and that her conclusion that any salary disparity between the Plaintiffs and other NMED employees is the result of national origin discrimination is speculative and unsubstantiated. See id. In addition, the Defendants assert that Dr. Schau's findings with regard to the EAFA scores are not supported by a reliable "factual basis, data, principles, methods or application of those methods." Defendants' EAFA Memorandum at 10. The Defendants contend that Dr. Schau's conclusions are the product of unreliable data and methodology, and that the Court should exclude her opinion testimony pursuant to rules 702 and 403.

In their written responses to the Defendants' Daubert motions, apparently invoked by the attacks on her methodology, the Plaintiffs acknowledged that, although Dr. Schau should be qualified as an expert in statistics, "the study she conducted is not a statistics study." Plaintiffs Salary Analysis Response at 3; Plaintiffs Ram and Thakur's Response to Motion in Limine to Exclude EAFA Analysis by Dr. Schau, filed November 21, 2006 (Doc. 69)("Plaintiffs' EAFA Response"). Indeed, at her

deposition, Dr. Schau had stated that she had not performed a statistical analysis, because “[i]t [wasn’t] appropriate to do.” Schau Deposition at 157:23-25. The Plaintiffs suggested that, “[o]n some level, Dr. Schau and Dr. Schau’s report are simply to be used at trial like a calculator, summarizing several hundred pages of documents and presenting those calculations to the jury, a procedure that is specifically allowed by [rule 1006 of the] Federal Rules of Evidence.” Plaintiffs’ Salary Analysis Response at 6. Finally, the Plaintiffs characterize the Defendants’ argument that Dr. Schau’s analysis is not reliable as a “red herring,” and request the Court permit Dr. Schau to testify with respect to her findings. See id.

In their Reply to the Plaintiffs’ Responses to the Defendants’ motions in limine, the Defendants stated that, if Dr. Schau was not functioning as an expert, they had other problems with her analysis and testimony. See Defendants’ Reply in Support of Three Motions in Limine at 4, filed December 5, 2006 (Doc. 79). The Defendants point out that rule 1006 does not condition admissibility of charts, summaries, or calculations on expert preparation. See id. The Defendants assert that their opposition is to Dr. Schau’s testimony accompanying the presentation of any of the evidence in her report; the Defendants contend “[h]er interpretations of the salaries and her conclusions given with the force of ‘expertise’ are well beyond the purpose of Rule 1006 to aid the jury in examining the evidence and must be excluded.” Id.

At the hearing on this motion, the Plaintiffs’ counsel retracted the statements in his Responses and conceded that he had not accurately described Dr. Schau’s work in his briefs. See Transcript at 21:22-25 (Geran). On direct examination, Dr. Schau explained her work as “descriptive” statistical analysis, not as a sample. In other words, she was describing the contents of voluminous documents, but bringing her expertise to bear by deciding what to describe.

The Plaintiffs frankly conceded that they had hired Dr. Schau to conduct an inferential or sampling statistical analysis that is frequently used in disparate impact cases, but that Dr. Schau advised that she could not do one here because the universe of data was too small. See id. at 119:10-23 (Geran). Dr. Schau then limited herself to making factual findings about what was in the documents. See id. at 119:20-23 (Geran). Thus, the Plaintiffs contend that she brought her expertise to bear by deciding what to describe and what to highlight. See id. at 118:11-119:9 (Geran).

The Court agrees that Dr. Schau is qualified to testify as an expert witness in statistics. It is concerned, however, that she did not fully bring her expertise to bear in this case and that the proffered testimony is not expert testimony regarding statistical analysis. Moreover, to the extent that her testimony does reflect expert testimony, the Court does not believe that Dr. Schau adequately eliminated, or, in some cases, addressed, nondiscriminatory explanations for her results. Given the Tenth Circuit's position that "in order for statistical evidence to create an inference of discrimination, the statistics must . . . eliminate nondiscriminatory explanations," see *Rea v. Martin Marietta Corp.*, 29 F.3d at 1456, and the Court's obligation, pursuant to its gatekeeper function under Daubert, to exclude unreliable evidence that will not assist the jury, the Court will exclude Dr. Schau's testimony.

I. TO THE EXTENT THE TESTIMONY DR. SHAU PROFFERS IS EXPERT TESTIMONY WITHIN THE SCOPE OF RULE 702, IT DOES NOT MEET THE RELIABILITY STANDARDS.

Dr. Schau has loved numbers since she was in kindergarten. See Transcript at 19:14 (Schau). The Defendants do not argue, and the Court does not believe, that Dr. Schau is unqualified to testify as a statistical expert. See Transcript at 19:20-23 (Kilgore). Dr. Schau's education, experience, and professional background are adequate to qualify her as an expert witness. The questions in dispute in this case are whether Dr. Schau's proffered testimony is expert testimony within the scope of rule

702 and, to the extent that it is expert testimony, whether that testimony satisfies the Tenth Circuit's criteria for reliability. The Court believes that, to the extent Dr. Schau's testimony is expert testimony within the scope of rule 702, it does not meet the Tenth Circuit's standard of reliability, because it does not adequately attempt to eliminate nondiscriminatory reasons for the inferences raised by the statistical results. The Court will therefore exclude Dr. Schau's testimony.

A. THE COURT NEED NOT DECIDE WHETHER DESCRIPTIVE ANALYSIS CAN CONSTITUTE EXPERT TESTIMONY UNDER RULE 702.

In their Responses to the Defendants' two motions to exclude Dr. Schau's testimony, the Plaintiffs state that "the study [Dr. Schau] conducted is not a statistics study." Plaintiffs' Salary Analysis Response at 3; Plaintiffs' EAFA Response at 4. See Plaintiffs' Salary Analysis Response at 7 ("[N]o real statistics were used here."). At the hearing on this motion, Dr. Schau objected to this characterization of her analysis. Dr. Schau testified that there are two methods of statistical analysis -- inferential statistics and descriptive statistics -- and that she performed a descriptive statistical analysis in this case.

Dr. Schau explained that inferential statistics involves evaluating a sample of some larger population, performing analysis on that sample, and then using that analysis to draw inferences about what has happened in the overall population. See Transcript at 21:4-10 (Schau). Dr. Schau indicated that it was unnecessary to employ inferential analysis in this case, because she was given the entire population of permitters, and so she performed a descriptive analysis of the data. See id. at 21:12-16 (Schau). Dr. Schau asserted that she processed the data which she was given, attempted to create an orderly way to organize it, and that her report is a summary description of what is found in the entire population of NMED permitters. See id. at 21:16-21 (Schau).

Dr. Schau contends that she brought her expertise to bear in this analysis because she “had to make some judgments about how even to organize the data, [and] what data to put into the computer.” Id. at 99:5-7 (Schau). She also maintains that she spent time attempting to verify the accuracy of data, and if she was able to tell that data was inaccurate, to find the information to make it accurate. See id. at 99:6-10 (Schau). Dr. Schau asserts that, once she had decided what statistics to run, she then presented them in a meaningful form and interpreted them. See id. at 99:11-13 (Schau).

Courts have recognized descriptive analysis as a valid methodology that statisticians employ in evaluating data. See Eli Lilly & Co. v. Zenith Goldline Pharms., Inc., 364 F. Supp. 2d 820, 885 (S.D. Ind. 2005); Dukes v. Wal-Mart Stores, Inc., 222 F.R.D. 137, 155-56, 161 (N.D. Cal. 2004). The parties have not cited, however, and the Court has not found in its independent research, any federal cases in which a statistician presented expert testimony solely on the basis of descriptive analysis. Cf. Stender v. Lucky Stores, Inc., 803 F. Supp. 259, 295-96 (N.D. Cal. 1992)(noting that statistician in Title VII case employed inferential statistics to measure disparities suggested by descriptive analysis); Citizens for a Better Gretna v. City of Gretna, 636 F. Supp. 1113, 1125 (E.D. La. 1986)(noting that statistician’s conclusions were based on a correlation and regression analysis combined with a descriptive analysis). Nevertheless, the Court need not decide whether descriptive analysis alone constitutes a valid basis for expert testimony on this motion.

The Supreme Court and the Tenth Circuit have set rigorous reliability standards for the admission of statistical evidence, and Dr. Schau’s analysis in this case does not satisfy those standards. See discussion infra Part I.B. The Tenth Circuit has not said that these standards apply to inferential statistics, but not descriptive statistics. Regardless, even if descriptive statistical analysis

does not have to meet all the rigorous requirements that the courts have imposed on other types of statistical analysis, descriptive statistics must still be reliable, and the Tenth Circuit's discussion of other types of statistical analyses still inform the reliability analysis here. Here, assuming that descriptive analysis can be an expertise and that, Dr. Schau brought some of that expertise to bear in this case, the Court does not believe her methodology or opinions are reliable.

B. DR. SCHAU'S SALARY ANALYSIS AND REVIEW OF THE EAFA SCORE REPORTS DO NOT SATISFY THE REQUISITE RELIABILITY STANDARDS.

Although statistical evidence may establish a prima facie case of disparate impact discrimination, any proffered statistical analysis "must involve appropriate comparables, and must cross a threshold of reliability before it can establish even a prima facie case of disparate impact." Ortega v. Safeway Stores, Inc., 943 F.2d at 1243 (internal citation and quotation omitted). Consistent with this requirement, and to assure that statistics evidence is meaningful, the Tenth Circuit requires that statistical analysis must eliminate nondiscriminatory explanations for any statistical disparity. See Martinez v. Wyoming, 218 F.3d at 1139. Because the Court concludes that Dr. Schau's descriptive analysis does not incorporate an adequate sample size, compare similarly situated individuals, or account for nondiscriminatory explanations, the Court will exclude her testimony from the trial in this case.

1. Dr. Schau's Salary Analysis.

The Plaintiffs assert that Dr. Schau performed a salary analysis of fifty-two Indian and Anglo NMED employees who completed at least one air quality permit as reflected by the EAFA scores reflected on "the various EAFA sheets for the various years." Plaintiffs' Salary Analysis Response at 5. The Plaintiffs argue that this group reflects a statistically meaningful sample of similarly situated

employees selected pursuant to objective criteria. See id. at 4. The Plaintiffs contend that salary was chosen as the main variable “because it contains information about all employment decisions within it, decisions at issue herein like performance reviews, raises, promotions, and disciplinary actions.” See id. at 7.

Despite the Plaintiff’s assertions, Dr. Schau’s salary analysis has several flaws. First, there is some question whether the sample size is adequate enough to produce meaningful results. See Mayor of Philadelphia v. Educ. Equal. League, 415 U.S. at 621 (suggesting that inadequate sample size may dilute the probative value of statistical evidence). Here the entire universe of permittees, as defined by Dr. Schau, was sixty-five individuals, and of these individuals, she identified fifty-two employees as being relevant to her study. Of these fifty-two individuals, twelve were designated as Indians. See Plaintiff’s Salary Analysis Addendum, Appendix B, Table 5. Moreover, within the Title V section that Jerabek supervised since 1997, there have been, at most, five permit engineers at any given time. See Defendants’ Salary Analysis Memorandum at 11. Accordingly, with respect to calculating the Indian employees’ median salary for any given year, Dr. Schau could not have incorporated more than twelve total data points; and, with respect to the calculating the Title V permit engineers’ median salary for any given year, Dr. Schau could not have incorporated more than five total data points.³ The Court is not convinced that these figures constitute an adequate sample to make Dr. Schau’s salary analysis results meaningful. See Mayor of Philadelphia v. Educ. Equal. League, 415 U.S. at 621 (echoing district court’s concern over sample size in case involving whether members of particular classes were excluded from a thirteen-member municipal panel and the universe

³The Court acknowledges that Dr. Schau does not appear to have calculated, in any of her graphs or tables, the median salary for the five Title V permit engineers for any given year.

of eligible members for nine of the thirteen seats was not the municipal population at large, but restricted to the highest ranking officers of designated categories of citywide organizations and institutions).

Second, there is evidence that Dr. Schau's salary comparison did not compare similarly situated individuals. The Plaintiffs acknowledge that Dr. Schau's definition of similarly situated individuals extends beyond the specific job class of the Plaintiffs, but contend that the fifty-two employees analyzed were similarly situated because: (i) each was employed by the AQB at some point between 1997 and 2005; (ii) each was employed for at least six months; and (iii) each completed at least one permit during that time period.⁴ See Plaintiffs' Salary Analysis Response at 5.

The Court does not agree that the fifty-two individuals included in Dr. Schau's study are similarly situated. First, Dr. Schau's analysis did not make any distinction between normal permit engineers and other types of employees, i.e. supervisory employees, temporary employees, employees from other NMED divisions, who may have had some permitting responsibility, but whose performance standards may have differed from the Plaintiffs. See Transcript at 67:8-11; 83:22-24 (Schau). Second, while Dr. Schau testified that she attempted to ascertain whether each employee had an undergraduate degree or graduate degree, she was unable to determine the subject matter of each employee's degrees or the relevance of the degree to permitting work. See id. at 27:1-19; 84:22-25 (Schau). Third, Dr. Schau did not consider how many years experience each individual

⁴The Plaintiffs indicate that they determined whether an employee completed at least one permit by looking at the EAFA scores for each permitter. The Defendants have presented evidence, however, that the AQB did not incorporate EAFA scores as a personnel evaluation measurement until 2000. Consequently, the Court has some concern regarding the validity of these scores before 2000 and questions whether this was an accurate method to identify permitters. While the Court recognizes that this concern strengthens its overall conclusion, because the Court finds that the salary analysis is unreliable on other grounds, the Court need not decide that question on this motion.

employee had or whether they had any previous professional or personal experiences which might be relevant. In any case, Dr. Schau acknowledged that the graph which she prepared to demonstrate the salary data, Graph 1, is only a graph of salaries and does not take into account education levels, specific degree fields, or relevant experience. See id. at 77:25-78:1 (Schau).

Most important, Dr. Schau's analysis did not eliminate nondiscriminatory explanations for the salary disparity between Indians and Anglos. See Rea v. Martin Marietta Corp., 29 F.3d at 1456; Martinez v. Wyoming, 218 F.3d at 1139; Doan v. Seagate Tech., Inc., 82 F.3d at 979. Dr. Schau did not read or consider any performance reviews. See Transcript at 85:25-86:2 (Schau). She did not consider the implications of funding legislation. See id. at 89:20-90:2 (Schau). She did not consider whether the median salaries of either group consisted of existing employees or new-hires who might have been subject to different salary structures. See id. 92:5-9 (Schau). Dr. Schau stated that she based her ultimate conclusion, at least in part, on her understanding that the Plaintiffs had applied to be promoted and were turned down. She acknowledged, however, that, in reaching her conclusion, she did not review any information regarding qualifications necessary for promotion or information related to the jobs for which the Plaintiffs had applied, and she admits that she does not know whether the Plaintiffs were qualified for the positions for which they applied. See id. at 82:2-6; 82:10-12 (Schau).

Considering the totality of the circumstances, the Court concludes that Dr. Schau's salary analysis does not meet the requisite standard of reliability to be admissible. The small sample size, the analysis' failure to consider similarly situated individuals, and its failure to address nondiscriminatory explanations for any disparities Dr. Schau's report suggests, undermine the statistical conclusions. The Court will exclude evidence related to Dr. Schau's salary analysis.

2. Dr. Schau's EAFA Analysis.

Dr. Schau concludes that, based on her analysis of the EAFA score reports, between 2003 and 2005, EAFA points were reassigned from Indian permittees to Anglo permittees. See Summary of Findings ¶ 7, at 2. The Defendants contend that any conclusions Dr. Schau drew from the EAFA score reports are meaningless, because the data that underlies the score reports is flawed. See Defendants' EAFA Memorandum at 8. The Plaintiffs counter that the Defendants' objection is a "red herring" and that Dr. Schau's analysis is not questioned because it is unreliable, but "because [it is] effective and relevant to matters directly pled in the [C]omplaint." Plaintiffs' EAFA Memorandum at 8. Because the Court concludes that Dr. Schau's EAFA analysis suffers from many of the same flaws as her salary analysis, and is therefore unreliable, the Court will exclude the evidence.

First, the Court questions whether Dr. Schau analyzed enough data to make her conclusions regarding EAFA scores statistically meaningful. Dr. Schau based her EAFA report on two out of three summaries of EAFA scores the Plaintiffs provided. See id. at 33:14-16; 38:7-9 (Schau). She did not chart out any differences that occurred in the third summary report that she did not use. See id. at 68:14-16 (Schau). Dr. Schau did not verify the accuracy of the summary reports against the original EAFA internal data sheets which constitute the data upon which the summaries are based. See id. at 37:12-14; 45:25-46:1 (Schau). More important, the 2003 report contained EAFA score information for twenty-two employees, and the 2005 report contained EAFA score information for nineteen employees. See Defendants EAFA Memorandum, Exhibit A, EAFA Totals From May 2003 Report, at P8021-P8022; Defendants EAFA Memorandum, Exhibit A, EAFA Scores for December 31, 2005 PAD Report, at P8025-P8026.

The two aspects of Dr. Schau's descriptive analysis also fail to incorporate a numerically

significant amount of data. Table 6 reflects the point differences between the 2003 and 2005 reports with respect to the nine employees whose 1995 to 2002 EAFA scores vary between the reports. Graph 5 is a bar graph of these changes for the five employees whose EAFA scores changed the most significantly between the reports. The Court is not convinced that this small amount of data is sufficient for Dr. Schau to bring her expertise to bear and reach a meaningful conclusion with respect to the changes between the reports.

Critically, as with her salary analysis, Dr. Schau's review of the EAFA score reports also failed to eliminate nondiscriminatory explanations for the fluctuation between score reports. First, Dr. Schau was not aware that the AQB did not use EAFA scores as an evaluative measurement until 2000, see id. at 60:17-20 (Schau), and so did not consider that the scores for years before 2000 might lack integrity in either or both the 2003 or 2005 reports. She did not consider any impact on the reports potentially caused by the implementation of new personnel management software in 2002 or consider deposition testimony by Joe Kimbrell that, when Kimbrell entered historical permit information in the new computer system, he assigned points associated with permits issued by employees who no longer worked at AQB under his own name or under the Jerabek's name, as placeholders. See id. at 61:16-24 (Schau); Defendants' EAFA Memorandum at 10. Dr. Schau placed no importance on the fact that some of the permitters who appeared to lose points, between the 2003 and 2005 reports, did not fall within the group of permitters subject to her salary analysis. See Transcript at 67:1-7 (Schau).

Finally, even if the Court were to determine that Dr. Schau's methodology in reviewing the EAFA score reports could satisfy the reliability requirement for statistical evidence, the Court believes Dr. Schau's conclusions are connected to the data only by the "ipse dixit" of Dr. Schau, and are

therefore inadmissible under the Supreme Court's decision in General Electric Corp. v. Joiner and the Tenth Circuit's decision in Dodge v. Cotter Corp. Gen. Elec. Corp. v. Joiner, 522 U.S. at 146. See Dodge v. Cotter Corp., 328 F.3d at 1222. Dr. Schau acknowledges that she has no way of ascertaining the cause of the discrepancies between the 2003 and 2005 reports, or of determining the permits, specifically, with which particular points were associated. See Transcript at 52:2-4; 69:7-10 (Schau). She also admits that she did not analyze the employment consequences to permittees who may have lost points from the 2003 to the 2005 reports, but who did not fall within the group of permittees subject to her salary analysis. See id. at 67:1-7 (Schau). In addition, the Defendants point out that Dr. Schau's analysis does not account for the fact that, as a supervisor, Jerabek's performance standards are different from the Plaintiffs, that EAFA points are not a part of his performance review, and that he therefore received no benefit from having EAFA points attributed to him. See Defendants' EAFA Memorandum at 10. In light of these factors, the Court concludes that "there is simply too great an analytical gap between the data and the opinion [Dr. Schau] proffered," and thus, will exclude her conclusory opinions drawn from the EAFA score reports. Dodge v. Cotter Corp., 328 F.3d at 1222 (quoting Gen. Elec. Corp. v. Joiner, 522 U.S. at 146).

Considering the totality of the circumstances, the Court concludes that Dr. Schau's review of the EAFA score reports does not meet the requisite standard of reliability to be admissible. The small sample size, and the review's failure to address nondiscriminatory explanations for any inconsistencies or improprieties Dr. Schau's report suggests, all undermine the statistical conclusions. Moreover, to the extent that the underlying statistical evidence could be considered reliable, the Court believes that there is too great an analytical gap between the data and Dr. Schau's conclusory

opinions. The Court will exclude evidence related to Dr. Schau's salary analysis.⁵

II. DR. SCHAU'S TESTIMONY IS NOT HELPFUL TO THE JURY AND ITS PREJUDICIAL IMPACT SUBSTANTIALLY OUTWEIGHS ITS PROBATIVE VALUE.

The Tenth Circuit has held that, even if the evidentiary reliability of expert testimony is established, pursuant to Daubert and its progeny, it is still within the district court's discretion to determine whether expert testimony will be helpful to the trier of fact. See United States v. Rodriguez-Felix, 450 F.3d at 1123. In reaching that determination, the Court must consider: (i) the evidence's relevance; (ii) the juror's common knowledge and experience; and (iii) whether the expert's testimony might usurp the jury's primary role as the evaluator of evidence. See id.

This helpfulness inquiry is closely related to a non-expert issue. While hired as an expert with impressive credentials, Dr. Schau's statistical analysis did not pan out because of the facts, and she began to function as a paralegal, preparing descriptions or summaries of what is in the documents. Thus, assuming that she was not bringing her expertise to bear, or that her use of her expertise in this case was only marginally employed, the Court must still determine whether this testimony is helpful and should be admitted.

The Court must reach this determination irrespective whether she is testifying as an expert or as a describer of the contents of documents. Accordingly, even assuming that Dr. Schau's findings could be found reliable -- a conclusion the Court has declined to reach -- the Court does not believe

⁵The Court acknowledges that the Defendants have also requested that the testimony, opinions, and report of Dr. Stafford be excluded to the extent that they rely on Dr. Schau's review of EAFA score reports. Because the Court cannot tell, based on the record before it at this time, whether any of Dr. Stafford's opinions or conclusions are based on excluded evidence, the Court will deny that portion of the Defendants' motion without prejudice to the Defendants re-raising their objection at trial during the testimony of Dr. Stafford and in the context of a more fully developed record.

that Dr. Schau's testimony will be helpful to the jury and would exercise its discretion to the exclude the evidence.

The Court does not deny that the evidence the Plaintiffs are proffering is relevant. The evidence relates to the salaries and performance evaluations of the Plaintiffs in comparison to other employees, Indians and non-Indians, at the NMED. A reasonable jury could find that this evidence makes a fact of consequence to the determination of the action -- whether the Plaintiffs were discriminated against because of their Indian national origin -- more or less probable. See Fed. R. Evid. 401. This does not end the relevance inquiry, however, as the Court must still decide, pursuant to rule 403, whether the evidence's "probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury." Fed. R. Evid. 403. The Court believes that, because of the small size of the data sample at play in this case, Dr. Schau's questionable selection of similarly situated employees in making her comparison, and Dr. Schau's failure to address any nondiscriminatory explanations for any of the inferences she draws from her descriptive analysis, the evidence poses a significant risk of confusing the issues or misleading the jury.

This conclusion relates to the Court's analysis of the second helpfulness factor -- the jurors' common knowledge and experience. During all times relevant to this lawsuit, the Title V permitters group was no larger than five permitters. The total statistical population that Dr. Schau considered consists of fifty-two employees. The time period that Dr. Schau considered was less than ten years for both the salary analysis and her review of EAFA scores. In performing her descriptive analysis, Dr. Schau tabulated data points and converted them to line and bar graphs. The Court does not believe that the magnitude of the relevant data in this case was so large that a jury could not fairly

analyze it without expert assistance or that the tabular and graphic representations of the data are so sophisticated that they required expert preparation.

If anything, expert endorsement of those tables and graphs may endow the evidence with a weight it does not deserve and which may exacerbate its tendency to mislead and amplify its prejudicial impact. This is especially true in light of the Court's finding that the factual premises upon which Dr. Schau's analysis and conclusions are predicated are unreliable, and therefore the evidence's overall probative value is diluted. Allowing an expert to suggest to the contrary would usurp the jury's primary role as the evaluator of evidence.

There are other problems with Dr. Schau's testimony to which the Court did not receive answers. If she is merely describing the contents of documents, there are best evidence problems. See Fed. R. Evid. 1002. There are also hearsay issues. Finally, even rule 1006 summaries must be of admissible evidence. See United States v. Samaniego, 187 F.3d 1222, 1224 (10th Cir. 1999).

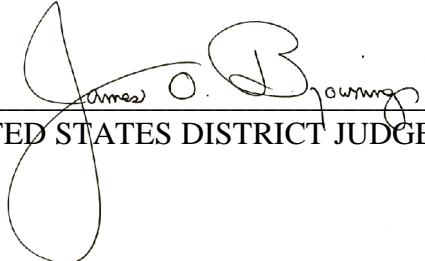
There may be solutions to these problems, but the Plaintiffs did not separately address these and help the Court decide whether there were real problems or phantom issues. In the end, as proponents of the evidence, the Plaintiffs did not meet their burden to prove that the testimony is admissible. If she is testifying as an expert, her expertise in this case was only marginally employed, and her methodology and opinions are neither reliable nor helpful. If she is merely describing the contents of documents, her description has limited usefulness, and brings a substantial risk of prejudice, confusion, and the possibility of misleading the jury. The Plaintiffs did not meet their burden of showing that the Court should admit the testimony.

Finally, it is not clear that excluding Dr. Schau's testimony will be a great detriment to the Plaintiff's case. While it may make it easier to have one witness summarize the contents of a large

number of documents, the documents, to the extent that they are admissible, can come in, and rule 1006 summaries are available. The Plaintiffs themselves may be able to testify to much of what Dr. Schau has discovered.

The Court finds that Dr. Schau's salary analysis and review of the EAFA score reports will not assist the jury in this case, and that the admission of that evidence is inappropriate under rule 403. The Court will exclude the evidence from the trial in this case.

IT IS ORDERED THAT the Defendant's Motion in Limine to Exclude Testimony, Opinions or Reports by Candace Schau, Ph.D. Regarding Salary Analysis and the Defendant's Motion in Limine to Exclude Testimony, Opinions or Reports by Candace Schau, Ph.D. Regarding EAFA Review are granted. The Court will exclude Dr. Schau's testimony, opinions, and/or reports from the trial in this case.



UNITED STATES DISTRICT JUDGE

Counsel:

George T. Geran
Santa Fe, New Mexico

Attorney for the Plaintiffs

M. Karen Kilgore
White, Koch, Kelly & McCarthy, P.A.
Santa Fe, New Mexico

Attorneys for the Defendants